

Appendix I

Monitoring, Reporting, and Key Performance Indicators

DRAFT

Measuring Progress

The Alexandria Mobility Plan (AMP) seeks to expand access to transportation choices, make it easier for people to get around by all modes, reduce single-occupancy vehicle travel, eliminate traffic fatalities and injuries, and more. **The City will track progress of the AMP through two means – overarching key performance indicators (KPIs) that are tied to the plan’s guiding principles, and metrics for each chapter that are mode- or chapter-specific.** Many chapter-specific metrics are related to and will feed into the plan-level KPIs.



Key Performance Indicators

While City actions can help move the needle on the KPIs, it is important to recognize that other external factors may influence them as well. By tracking the KPIs, the City can take the pulse on how residents, visitors, and workers are experiencing mobility and potentially adjust areas of focus accordingly throughout the life of this plan.

Each guiding principle is associated with just one or two KPIs to understand mobility in Alexandria at the highest levels. To holistically track outcomes that address the equitable guiding principle, all KPIs are given an “equity lens” to measure progress in a way that is consistent with the City’s ALL Alexandria resolution and ensures equitable outcomes for all Alexandrians, especially neighborhoods and populations that have been historically underserved. **Measuring progress toward achieving the guiding principles allows the City to track how transportation projects and initiatives improve and expand choices—and more choices can lead to improved quality of life and other benefits beyond transportation.**

There are many data challenges associated with measuring these high-level outcomes, so some KPIs may not be the ideal measure for a certain guiding principle. However, these were selected in consultation with City staff, subject matter experts, and the Alexandria Mobility Plan Advisory Committee (AMPAC) to be reflective of measures other plans are targeting and because they provide useful information on the outcomes this plan aims to achieve. As additional data and tools become available, the City may be able to track the guiding principles more effectively.

For each KPI, baseline information is provided which represents the most recent data available. The City commits to updating this information regularly following plan adoption, at least every three years, and publishing resulting data in a transparent manner on the City website.

Guiding Principles

KPIs are tied to the guiding principles of the AMP and are used to measure plan-level progress toward achieving City goals and targets through the AMP.

Accessible

Alexandria will work to make its transportation network easily accessible for users of all ages and abilities.

Connected

Alexandria’s transportation system will take you where you want to go seamlessly by leveraging technology and integrating transportation and land use.

Convenient

Alexandria will provide a transportation system with high-quality mobility options that are reliable, frequent, proximate, and comfortable.

Equitable

Alexandria acknowledges that there are disparities in neighborhoods and populations in the city that have been historically underserved. Alexandria will be targeted, inclusive, and intentional in addressing gaps in mobility options available, their quality, and safety.

Safe

Alexandria will eliminate all traffic deaths and serious injuries by 2028.

Sustainable

Alexandria will prioritize low-carbon mobility options and reduce automobile dependency.

Accessible and Connected Definitions

The Accessible and Connected indicators are measured using “proximity to alternatives to driving” to understand the choices available. Useful alternatives to driving generally need to be nearby, frequent, and safe. Each component of this measure - transit access, pedestrian access, and bicycle access - have different measurements based on the characteristics of the particular mode.

Transit

Areas of Alexandria that are in close proximity to high-frequency transit service:

- **Proximity to Bus** - Areas within ¼ of a mile of a bus stop with midday bus frequencies of every 15 minutes or better.
- **Proximity to Rail** - Areas within ¼ of a mile of a Metrorail station with midday train frequencies of every 15 minutes or better.

Pedestrian

Areas of Alexandria that have no gaps in sidewalk coverage:

- **Proximity to Sidewalks** - Areas that are not within 330 feet (1/16 of a mile or about one city block) of a sidewalk gap (have sidewalks on both sides).

Bicycle

Areas of Alexandria that are in close proximity to on-street bicycle lanes and off-street paved trails:

- **Proximity to Bicycle Lanes** - Areas within 1/8 of a mile of an on-street bicycle lane.
- **Proximity to Paved Trails** - Areas within 1/8 of a mile of an off-street paved trail.

Accessible

Alexandria will work to make its transportation network easily accessible for users of all ages and abilities

In the context of the AMP, “Access” refers to the proximity of residents to alternatives to driving, which include high-frequency bus or rail service, bike lanes and trails, and connected sidewalks as defined on the previous page. Recognizing that everyone has access to a street to drive on, the City is measuring access this way to understand what choices people have close by.

Equity Lens:

- Percent of residents (low-income residents, people of color, seniors, and people with disabilities) in close proximity to alternatives to driving

Key Performance Indicator:

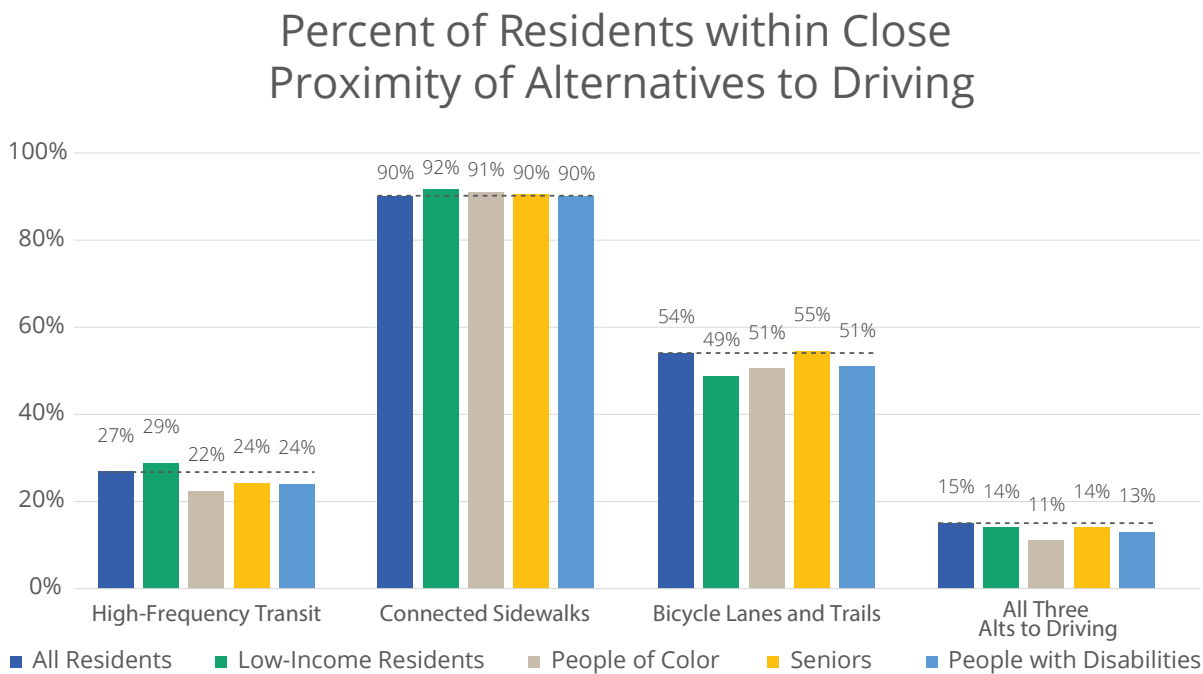
- Percent of residents in close proximity to alternatives to driving

Why measure “Proximity to Alternatives to Driving?”

Driving is a popular way to make many trips in Alexandria, and this will likely continue. A priority of the AMP is to give people choices. Every home has access to a street, but there are still many Alexandrians without nearby sidewalks, bike lanes and trails, or frequent transit, meaning they do not have the convenient choice to walk, bike, or take transit. Having choices benefits everyone, from cleaner air, healthier lifestyles, and less congestion. Having choices means that when gas prices rise or if there is a transit shutdown, people can still get around safely and conveniently.

This is what we call “Close Proximity to Alternatives” and this is why the following sections use it as an important metric: it measures high-quality, practical choices.

Baseline Information:



The City’s investments in transit, such as the new Potomac Yard Metrorail station and implementation of the Alexandria Transit Vision Plan, will significantly increase the percentage of Alexandria residents in close proximity to high-frequency transit in the future. When implemented, the Transit Vision Plan will increase the percentage of all residents in close proximity to high-frequency transit from 27% to 83%.

Sources:
Baseline Transit Network (Midday): City data, 2021 (prior to Alexandria Transit Vision Plan implementation)
Baseline Pedestrian Network: City data, 2021
Baseline Bicycle Network: City data, 2021
All Residents: Total population counts from the 2017 American Community Survey (ACS) by Block Group.
Low-Income Residents: Total households identified in the 2017 ACS as being in poverty according to Federally defined poverty standards.
People of Color: Count of 2017 ACS estimates of people identifying as non-white.
Seniors: Count of 2017 ACS estimate of people over 65.
People with Disabilities: Count of 2017 ACS estimates

Connected

Alexandria’s transportation system will take you where you want to go seamlessly by leveraging technology and integrating transportation and land use

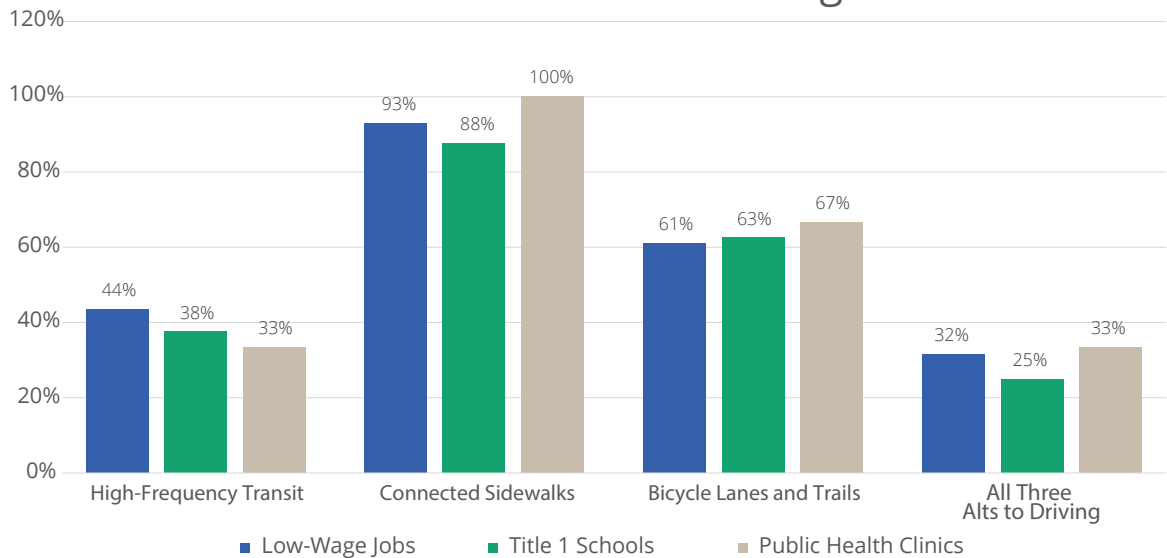
“Destinations” are broadly defined as employment, opportunities, or services critical to quality of life and include jobs, schools, parks and recreation centers, grocery stores, and healthcare facilities. Alternatives to driving include high-frequency bus or rail service, bike lanes and trails, and connected sidewalks.

Equity Lens:

- Percent of low-wage jobs, Title 1 schools, and public health clinics that are connected to alternatives to driving

Baseline Information:

Percent of Low-Wage Jobs, Title 1 Schools, and Public Health Clinics That Are Connected to Alternatives to Driving



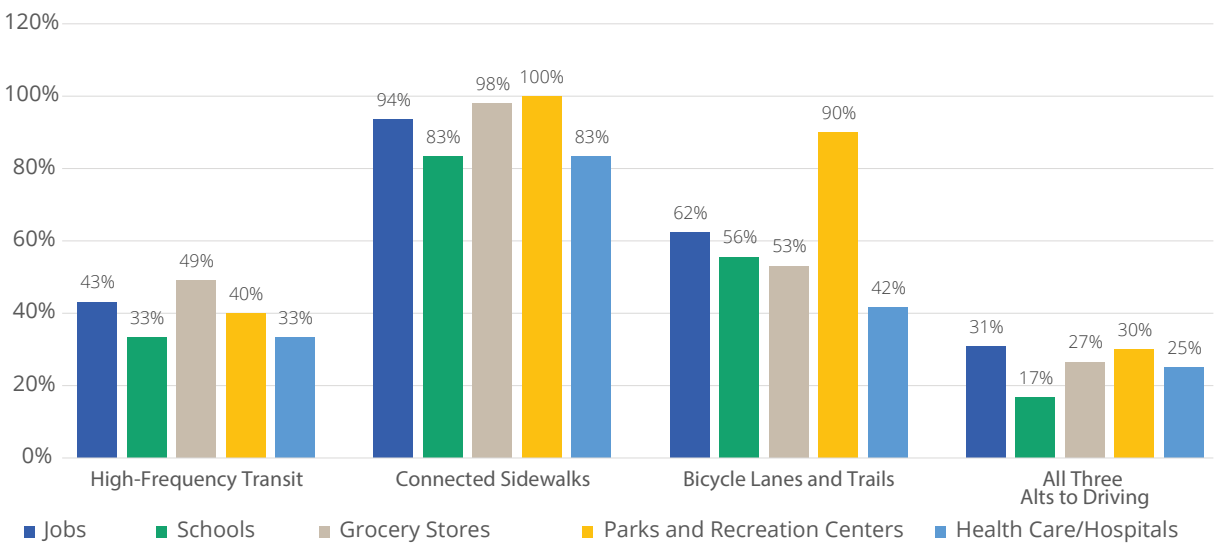
Sources:
Low-Wage Jobs: Count of Jobs in each Census Block Group paying less than \$1,250 per month from the ACS Longitudinal Employer-Household Dynamics (LEHD) “OnTheMap” tool.
Title 1 Schools: Alexandria City Public Schools; data from the National Center for Education Statistics.
Public Health Centers: Clinic locations within the City of Alexandria taken from [OpenStreetmap](#). (Search query: “amenity”=“clinic” and “healthcare”=“clinic”).

Key Performance Indicator:

- Percent of destinations that are connected to alternatives to driving

Baseline Information:

Percent of Destinations That Are Connected to Alternatives to Driving



Sources:
Jobs: Count of jobs in each Census Block Group taken from the 2017 ACS Longitudinal Employer-Household Dynamics (LEHD) “OnTheMap” tool.
Schools: Alexandria City Public Schools; data from the National Center for Education Statistics.
Grocery Stores: Grocery locations within Alexandria City Boundary, City of Alexandria, December 2020.
Parks and Recreation Centers: Parks and Recreation Locations with the Alexandria City Boundary, City of Alexandria, December 2020.
Health Care / Hospitals: Medical Facilities within Alexandria City Boundary, City of Alexandria, December 2020 (Facility types include Urgent Care, Health Care Facilities, and Hospitals).

Convenient

Alexandria will provide a transportation system with high-quality mobility options that are reliable, frequent, proximate, and comfortable.

Every year, Alexandrians can share feedback on their experiences with living in the city and factors that shape their quality of life, including transportation, via the Resident Survey. This helps City leadership know more about residents’ expectations for the City government and how well government is performing for the community. The City will also be tracking this via specific metrics within the Transit, Smart Mobility, Streets, Curb Space and Parking, and Pedestrian and Bicycle chapters.

Equity Lens:

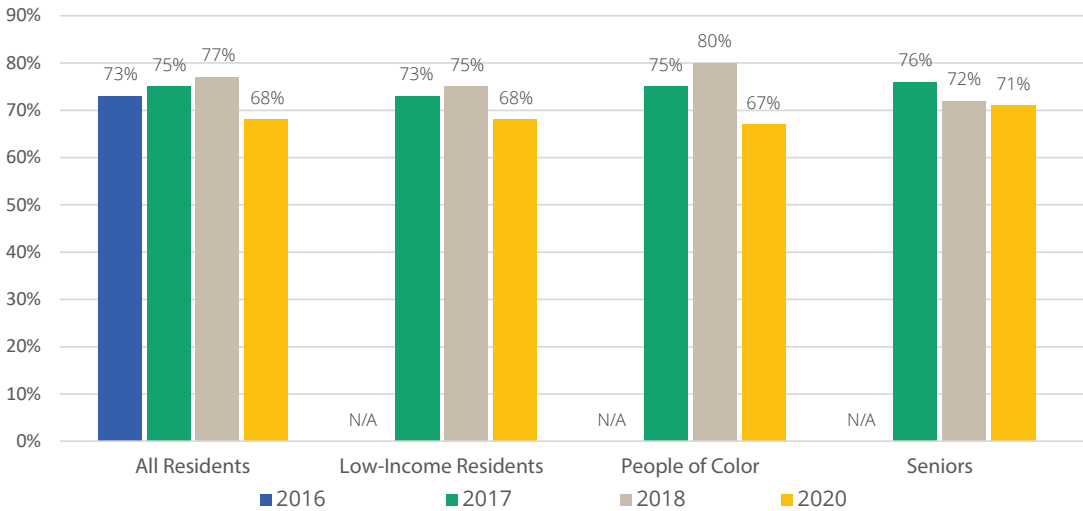
- Percent of residents (low-income residents, people of color, and senior residents) who say it is easy to get around.
 - In 2018 and 2020, there was no statistically significant difference in responses between high income and low income individuals or between white and non-white individuals for overall ease of getting to the places they usually have to visit.**

Key Performance Indicator:

- Percent of residents who say it is easy to get around

Baseline Information:

Percent of Residents with a Positive View of "The Overall Ease of Getting to the Places You Usually Have to Visit"



Note: 2016 data by income, race/ethnicity, and age was not available.

Sources:
Alexandria Resident Survey
Low-Income Residents: Survey respondents with an annual household income Less than \$50,000.
People of Color: Survey respondents that identify as non-white.
Seniors: Survey respondents over 55.

Equitable

Alexandria acknowledges that there are disparities in neighborhoods and populations in the City that have been historically underserved. Alexandria will be targeted, inclusive, and intentional in addressing gaps in mobility options available, their quality, and safety.

Key Performance Indicator:

- All guiding principles will be measured for the city as a whole and with an equity lens that examines how specific communities of greater need are faring with regards to the specific outcomes that this plan seeks to achieve.
 - **Accessible:** Percent of residents (low-income residents, people of color, seniors, and people with disabilities) in close proximity to alternatives to driving.
 - **Connected:** Percent of low-wage jobs, Title 1 schools, and public health clinics that are connected to alternatives to driving.
 - **Convenient:** Percent of residents (low-income residents, people of color, and senior residents) who say it is easy to get around.
 - **Safe:** Number of crashes, fatalities, and serious injuries within Equity Emphasis Areas.
 - **Sustainable:** Percent of residents (low-income residents, people of color, seniors, and people with disabilities) in close proximity to alternatives to driving.

Safe

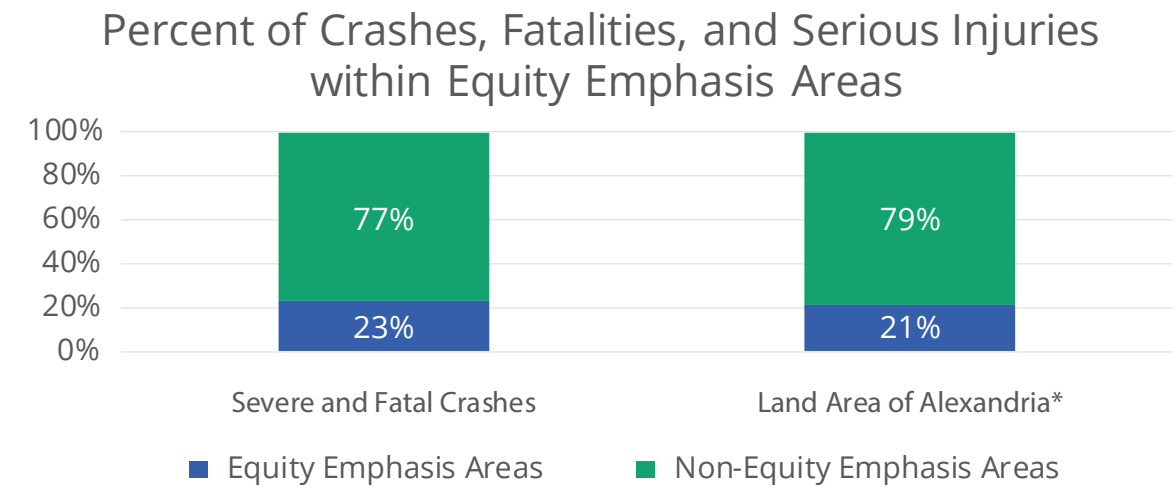
Alexandria will eliminate all traffic deaths and serious injuries by 2028.

Through its Vision Zero Action Plan, Alexandria established a goal of zero traffic deaths and serious injuries by 2028. The City recognizes that traffic deaths and serious injuries are preventable through proper engineering, enforcement, evaluation, and education. The Vision Zero performance dashboard tracks how well the City is performing as part of the overall performance dashboard system.

Equity Lens:

- Number of crashes, fatalities, and serious injuries within Equity Emphasis Areas

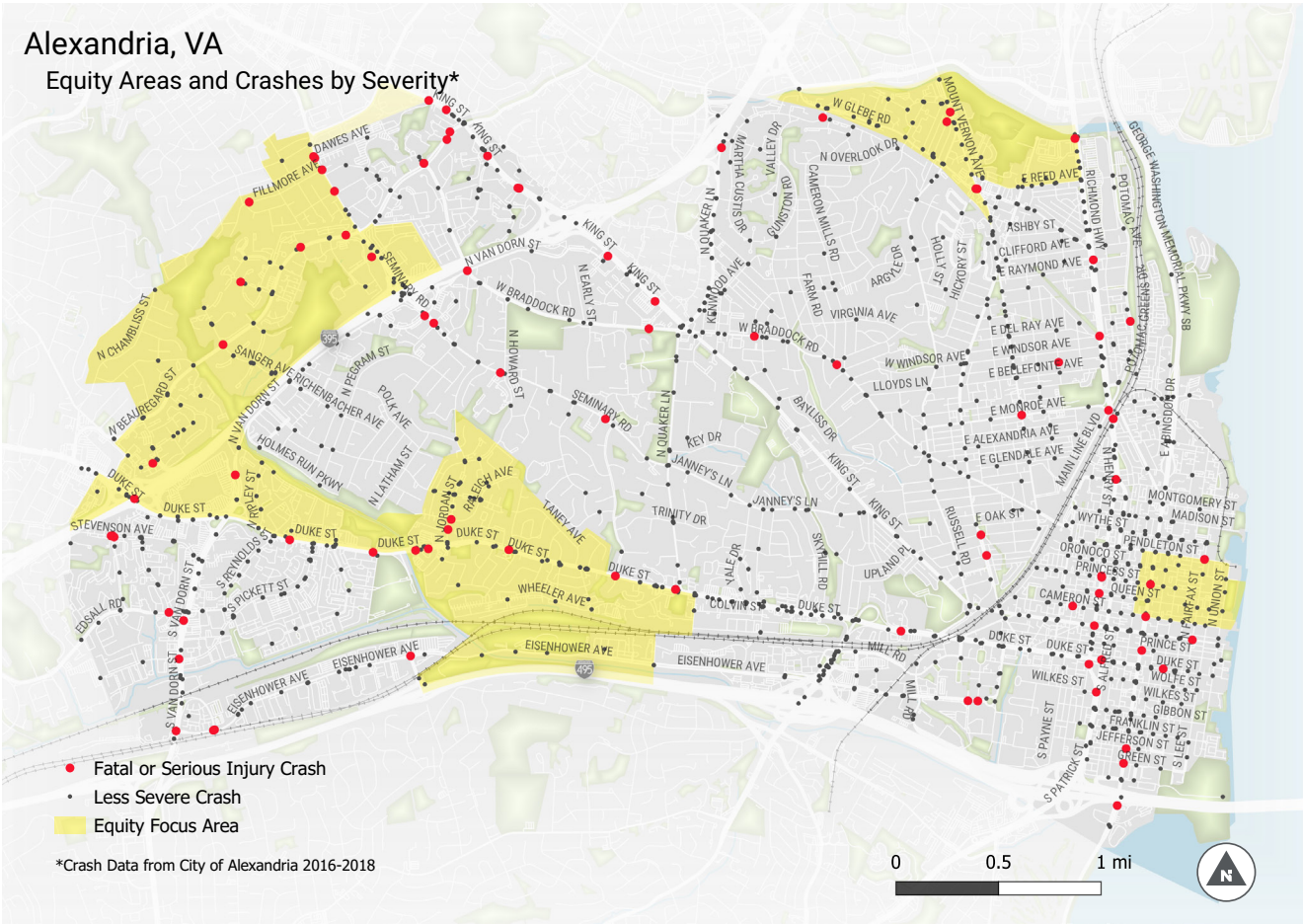
Baseline Information:



*For the equity lens of the Safe KPI, the City is measuring against land area of Equity Emphasis Areas, as demographic information is not typically documented in crash reports. The Metropolitan Washington Council of Governments (MWCOG) established Equity Emphasis Areas in Alexandria, which make up 21 percent of the city's total land area. The percentage of all severe and fatal crashes in Alexandria that occur within these Equity Emphasis Areas, however, is slightly overrepresented at 23 percent. It is important to consider land area to ensure that communities of greater need do not experience disproportionate effects of traffic crashes compared to other areas of the city.

Safe (continued)

Equity Emphasis Areas and Crashes by Severity

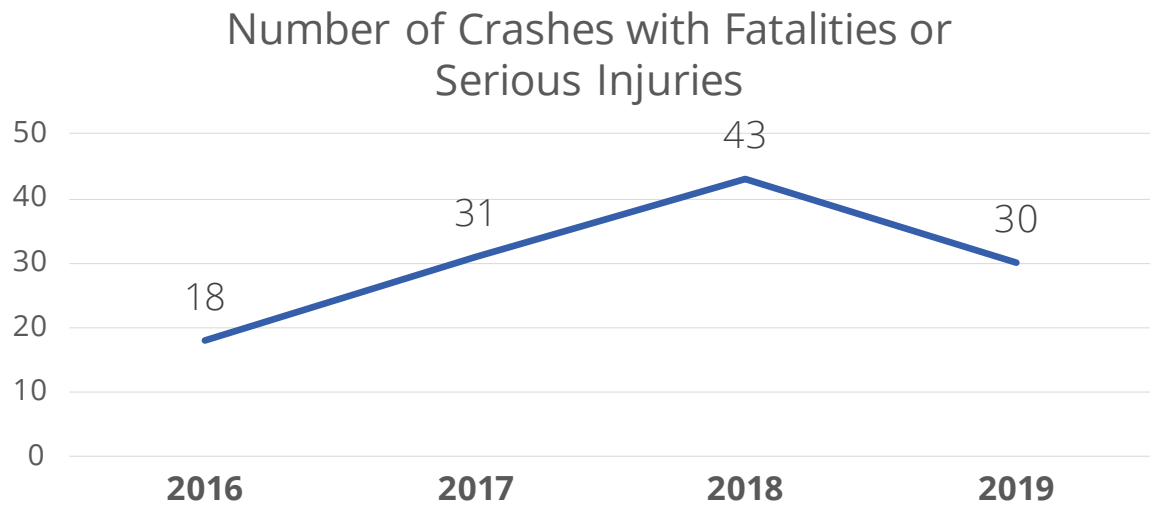


Key Performance Indicator:

- Number of crashes, fatalities, and serious injuries

This KPI is consistent with the City Strategic Plan and Vision Zero initiative, which aims to achieve zero severe injuries and fatalities from crashes.

Baseline Information:



Equity Emphasis Areas were developed by the Metropolitan Washington Council of Governments (MCOG) using tract-level Census data to identify communities that have significant concentrations of low-income and/or minority populations.

Sources:
Equity Emphasis Areas: Metropolitan Washington Council of Governments (MCOG). Includes areas with concentrations of low-income and minority households.
Crashes: 2016-2019 crash locations, City of Alexandria, Virginia Department of Transportation
City Strategic Plan Key Indicators: Transportation, City of Alexandria.
Vision Zero Performance Dashboard, City of Alexandria.

Sustainable

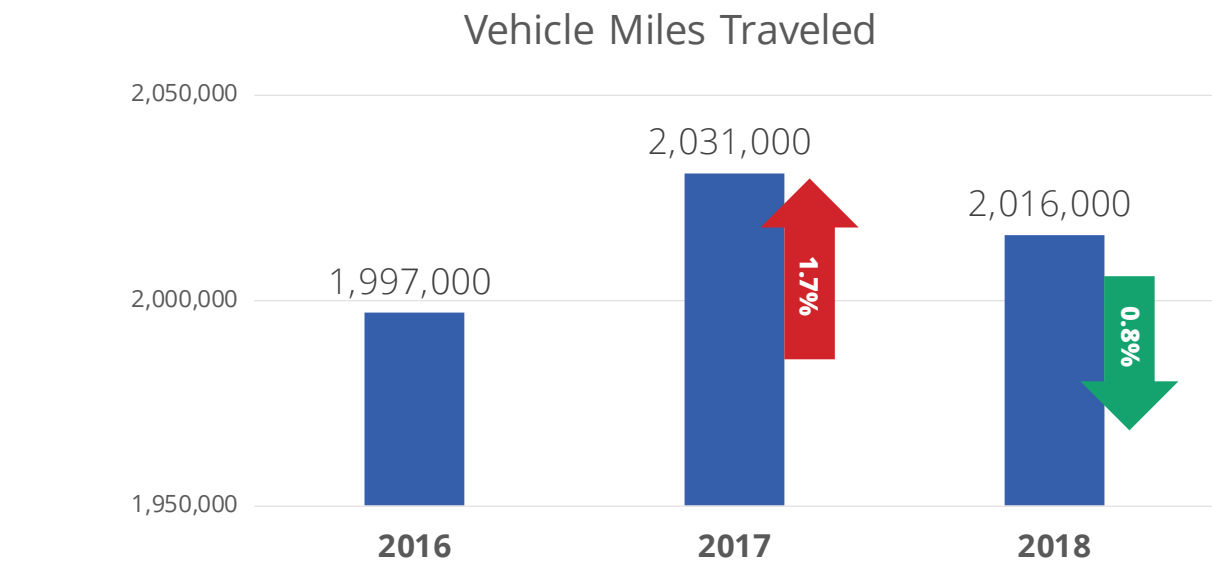
Alexandria will prioritize low-carbon mobility options and reduce automobile dependency.

Through its Environmental Action Plan, Alexandria recognized that transportation is a leading contributor to greenhouse gas emissions that adversely affect the natural environment and established goals and targets to reduce these effects.

Key Performance Indicator:

- Vehicle miles traveled
- Percent of commuters using alternative transportation options

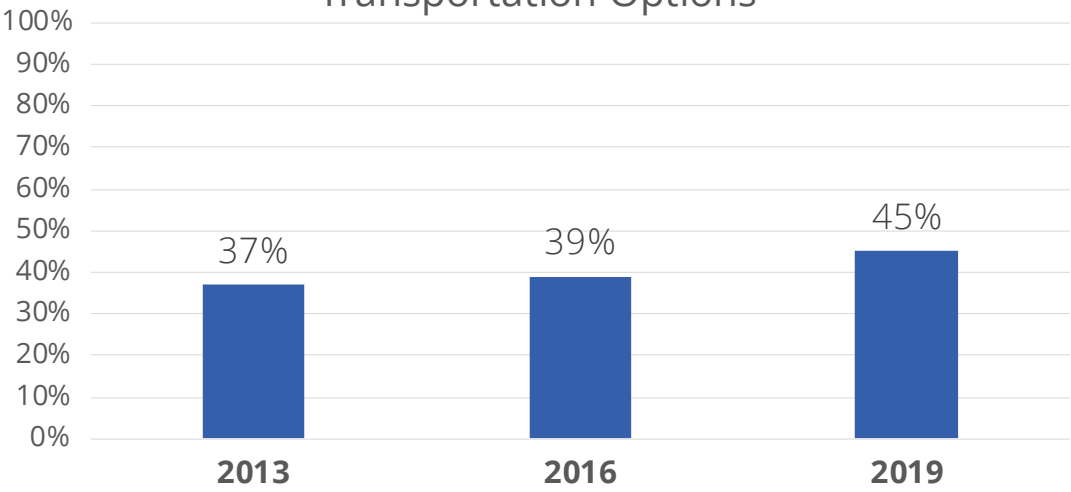
Baseline Information:



Source: National Capital Region Transportation Planning Board

Alternative transportation options include riding the bus, Metrorail, and biking. This KPI is consistent with the City Strategic Plan, which set a target of 40% of commuters using alternative transportation modes by 2022. Data is reported every three years by fiscal year (July-June), and comes from the Metropolitan Washington Council of Government's State of the Commute Survey.

Percent of Commuters Using Alternative Transportation Options

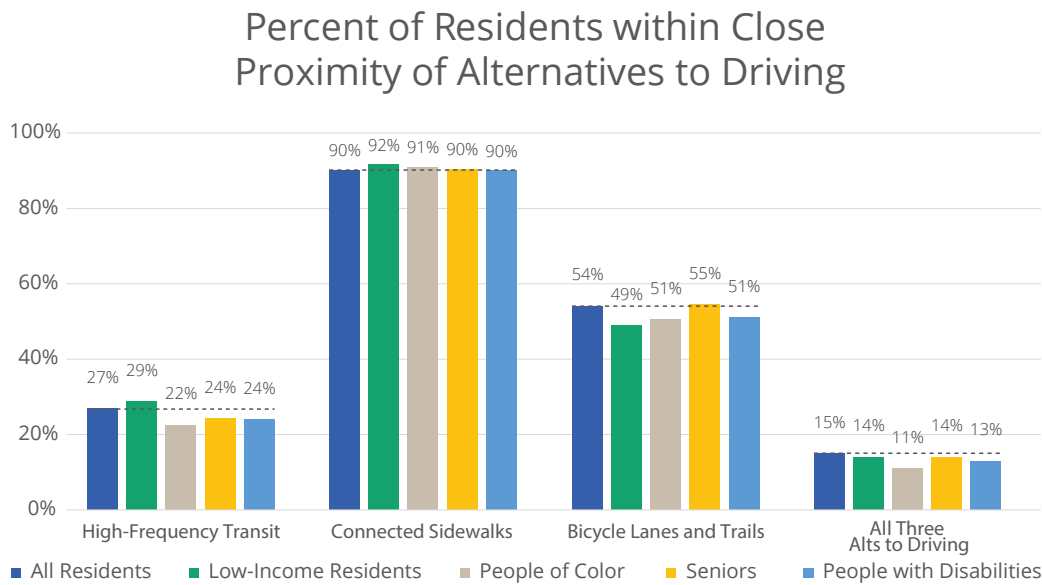


Source: City Strategic Plan Key Indicators: Transportation

Equity Lens:

- Percent of residents (low-income residents, people of color, seniors, and people with disabilities) in close proximity to alternatives to driving

Baseline Information:



Source: See "Accessible" KPI in previous section

The City will continue to investigate better data sources for tracking the Sustainability indicator through an equity lens. Until a better data source becomes available, the City will refer to the Accessible indicator to improve access to multiple transportation choices for all population groups.

Chapter Metrics

AMP metrics are tied to each specific plan chapter and are more focused on individual topics or modes of transportation. These metrics will be regularly measured to track how the chapter-level AMP policies and strategies are moving the needle on transportation improvements in the city. Many chapter-specific metrics are related to and will feed into the plan-level KPIs.

Metric	Directionality
Transit	
Percent of residents within ¼ mile of 15 minute or better service	↑
Percent of low-income, people of color, and senior residents within ¼ mile of 15 minute or better service	↑
Percent of residents who say it is easy to get around by transit	↑
Percent of people taking transit to work (mode share)	↑
Annual transit ridership	↑
DASH on-time performance	↑
Ease of travel by public transportation (Resident Survey*)	↑
Smart Mobility	
Number of intersections with smart signal technology	↑
Percent of intersections with smart signal technology or transit priority signals in Equity Emphasis Areas	↑
Rating of traffic flow on major streets (Resident Survey*)	↑
Streets	
Weekday hours of delay	↓
Weekday Vehicle Miles Traveled	↓
Number of fatal and serious crashes	↓
Rating of ease of travel by car (Resident Survey*)	↑

Metric	Directionality
Supporting Travel Options	
Number of mobility hubs	↑
Number of partnerships for travel training programs	↑
Number of community influencers involved with GO Alex	↑
Curb Space and Parking	
Rating of ease of public parking (Resident Survey*)	↑
Number of on-street bikeshare stations, scooter corrals, and parklets introduced per the CurbSpace Prioritization Framework	↑
Pedestrian and Bicycle	
Number of bicycle and pedestrian crashes	↓
Percentage of people walking or biking to work (mode share)	↑
Linear feet of new sidewalk installed per year	↑
Miles of on-street bike facilities	↑
Miles of paved off-street trails	↑
Number of bikeshare and other micromobility trips	↑
Rating of ease of walking (Resident Survey*)	↑
Rating of ease of travel by bicycle (Resident Survey*)	↑

↑ Increase ↓ Decrease

*The Alexandria Resident Survey reports results based on race/ethnicity, income, and age in addition to all residents.